**ESPM Dragon Blood Reference Application Design Document**

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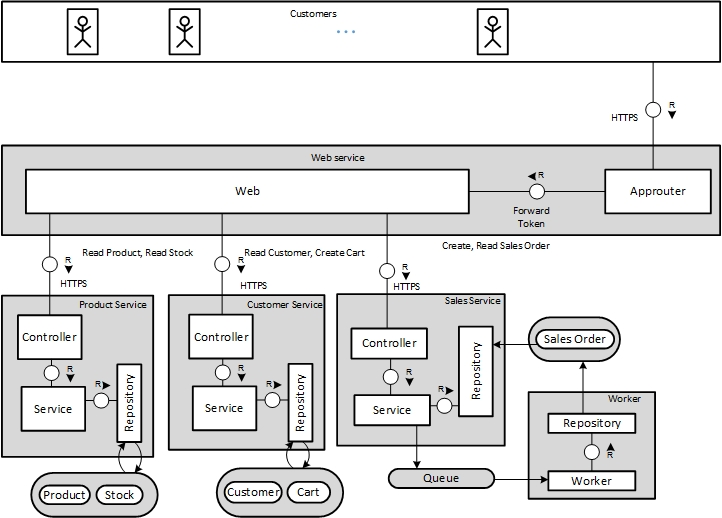
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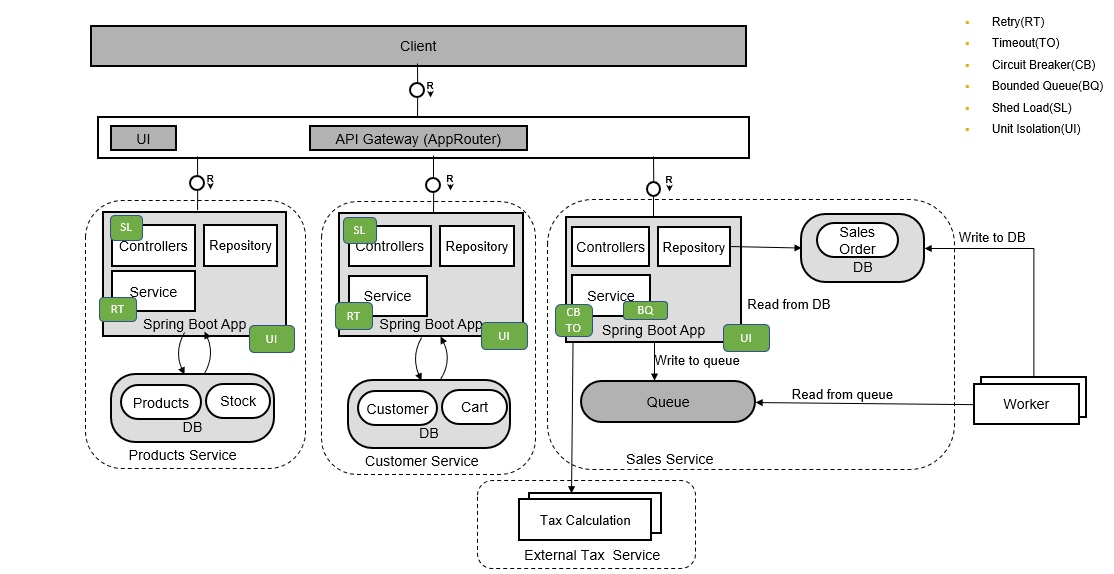
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# Architecture

The below block diagram shows the architecture of the ESPM application



The design pattern implementation scheme is shown in the diagram below



# Data Model

## 2.1 Product Service

**Products**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column Name** | **Database**  **Data Type** | **Java Data Type** | **Length** | **Constraints** | **Remarks** |
| PRODUCT\_ID | VARCHAR | String | 10 | PKey |  |
| NAME | VARCHAR | String | 255 |  | Name of the Product |
| SHORT\_DESCRIPTION | VARCHAR | String | 255 |  |  |
| CATEGORY | VARCHAR | String | 40 |  |  |
| WEIGHT | NUMERIC | BigDecimal | precision = 13, scale = 3 |  |  |
| WEIGHT\_UNIT | VARCHAR | String | 3 |  |  |
| PRICE | NUMERIC | BigDecimal | precision = 23, scale = 3 |  |  |
| CURRENCY\_CODE | VARCHAR | String | 5 |  |  |
| DIMENSION\_WIDTH | NUMERIC | BigDecimal | precision = 13, scale = 4 |  |  |
| DIMENSION\_DEPTH | NUMERIC | BigDecimal | precision = 13, scale = 4 |  |  |
| DIMENSION\_HEIGHT | NUMERIC | BigDecimal | precision = 13, scale = 4 |  |  |
| DIMENSION\_UNIT | VARCHAR | String | 3 |  |  |
| PICTURE\_URL | VARACHAR | String | 255 |  |  |

**Stock**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column Name** | **Database Data Type** | **Java Data Type** | **Length** | **Constraints** | **Remarks** |
| PRODUCT\_ID | VARCHAR | String | 10 | PKey |  |
| QUANTITY | NUMERIC | BigDecimal | precision = 13, scale = 3 |  |  |

## 2.2 Customer Service

**Customer**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column Name** | **Database**  **Data Type** | **Java Data Type** | **Length** | **Constraints** | **Remarks** |
| CUSTOMER\_ID | VARCHAR | String | 10 | PKey |  |
| EMAIL\_ADDRESS | VARCHAR | String | 255 | Unique |  |
| PHONE\_NUMBER | VARCHAR | String | 30 |  |  |
| FIRST\_NAME | VARCHAR | String | 40 |  |  |
| LAST\_NAME | VARCHAR | String | 40 |  |  |
| DATE\_OF\_BIRTH | VARCHAR | String | 255 | Not Null |  |
| CITY | VARCHAR | String | 40 |  |  |
| POSTAL\_CODE | VARCHAR | String | 10 |  |  |
| STREET | VARACHAR | String | 60 |  |  |
| HOUSE\_NUMBER | VARCHAR | String | 10 |  |  |
| COUNTRY | VARCHAR | String | 3 |  |  |

**Cart**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column Name** | **Database**  **Data Type** | **Java Data Type** | **Length** | **Constraints** | **Remarks** |
| ITEM\_ID | VARCHAR | String | 10 | PKey |  |
| CUSTOMER\_ID | VARCHAR | String | 10 |  |  |
| PRODUCT\_ID | VARCHAR | String | 10 |  |  |
| QUANTITY | NUMERIC | BigDecimal | precision = 13, scale = 3 |  |  |
| CHECK\_OUT\_STATUS | BOOLEAN | Boolean |  |  | Checked out Y/N |

## 2.3 Sales Service

**Sales Order**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Column Name** | **Database**  **Data Type** | **Java Data Type** | **Length** | **Constraints** | **Remarks** |
| SALES\_ORDER\_ID | VARCHAR | String | 10 | PKey |  |
| CUSTOMER\_EMAIL | VARCHAR | String | 255 |  |  |
| CURRENCY\_CODE | VARCHAR | String | 5 |  |  |
| GROSS\_AMOUNT | NUMERIC | BigDecimal | precision = 15, scale = 3 |  |  |
| NET\_AMOUNT | NUMERIC | BigDecimal | precision = 15, scale = 3 |  |  |
| TAX\_AMOUNT | NUMERIC | BigDecimal | precision = 15, scale = 3 |  |  |
| LIFE\_CYCLE\_STATUS | VARCHAR | String | 1 | Not Null | N - New  I – In Progress  X - Cancelled |
| LIFE\_CYCLE\_STATUS\_NAME | VARCHAR | String | 255 |  |  |
| CREATED\_AT | VARCHAR | String | 255 |  |  |
| DELIVERY DATE | VARCHAR | String | 255 |  |  |
| PRODUCT\_ID | VARCHAR | String | 10 |  |  |
| QUANTITY | NUMERIC | Big Decimal | precision = 13, scale = 3 |  |  |
| QUANTITY\_UNIT | VARCHAR | String | 3 |  |  |

LIFE\_CYCLE\_STATUS column can have values

* New - N
* In Progress - I
* Cancelled - X

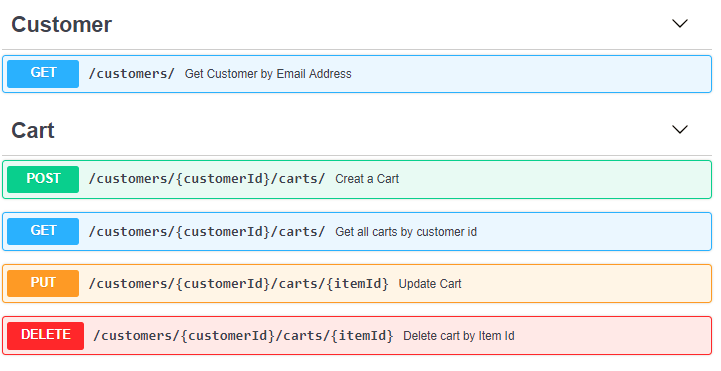
When a new sales order is created the status in N (New). If the Stock is available, its changed to In Progress. If no stock is available the status us changed to X (Cancelled)

# Service Document

**Service URL**

/customer.svc/api/v1/customers/

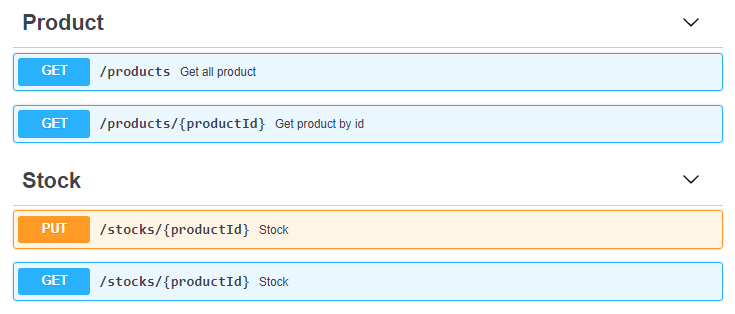
/customer.svc/api/v1/ customers /{customerId}carts/



**Service URL**

/product.svc/api/v1/products/

/product.svc/api/v1/stocks/



**Service URL**

/sale.svc/api/v1/sales

